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ABSTRACT

In 1979 the research department of the Fort Worth Independent School District (Texas) developed a plan for evaluating the utilization of time in elementary schools, middle schools, and high schools. This report deals with the classroom observation undertaken in grades four, seven, and ten. Activities in math and language arts classes were categorized under the following headings: instructional activities, management activities (like taking roll), and classroom interferences. Data obtained were analyzed separately by subject for each grade and were also compiled across grades by subject area. Results showed great variations in the use of time in different classrooms. For example, direct teaching time in the various classes ranged from none to a high of 45 minutes at elementary, 52 minutes at middle school, and 50 minutes at high school. The paper recommends that the middle schools increase their amount of instructional time, decrease the amount of time students spend on applied tasks without teacher aid, and decrease the amount of time spent on management activities. (Author/LD)

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FORT WORTH, TEXAS

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FORT WORTH INDEPENDENT SCHOOL DISTRICT

TIME UTILIZATION STUDY

CLASSROOM OBSERVATION

1979-80

Prepared for

Dr. Gerald Ward
Superintendent

by

Fae Lysiak, Assistant Director
Department of Research and Evaluation

Dr. Charles L. Evans, Director

MAY 9 1980

Time Utilization Study

Classroom Observation

Department of Research and Evaluation
Fae Lysiak, Assistant Director

Introduction

In fall 1979, the Research Department developed a design for evaluating the utilization of time in the elementary, middle school and high schools through 1) classroom observation, 2) teacher logs, and 3) teacher opinionnaires. This report deals with data obtained through the first procedure.

Classroom observations were undertaken at grades four, seven, and ten. Math and language arts classes were observed by the Research staff during the months of November and December. The specifics of the sampling method are reported in Appendix A, "Evaluation Design".

Utilization of Time

Classroom activities were catagorized under the following major headings:

1) Instructional activities: direct teaching, testing, audio-visual, applied instruction with teacher aid, applied instruction without teacher aid, and instructional related management activities.

2) Management activities: management activities that are not directly related to instruction.

3) Interferences: planned or other interferences.

For a more detailed explanation of these categorization of events, see Appendices B and C.

Data obtained from the classroom observations were analyzed separately by subject for elementary, middle and high school. Results were also compiled across grades by subject area and graphically illustrated in Charts 1 - 4.

Chart 1 graphically illustrates and compares how math and language arts classroom time is utilized. Results given in this chart indicate:

1) Over three-fourths of the allocated classroom time is spent on instructional activities.

2) A greater percentage of the class period was spent on instructional activities in language arts than in math classes.

3) More direct teaching was observed in language arts classes than in math classes.

4) More applied instructions without teacher assistance was observed in language classes than in math classes.

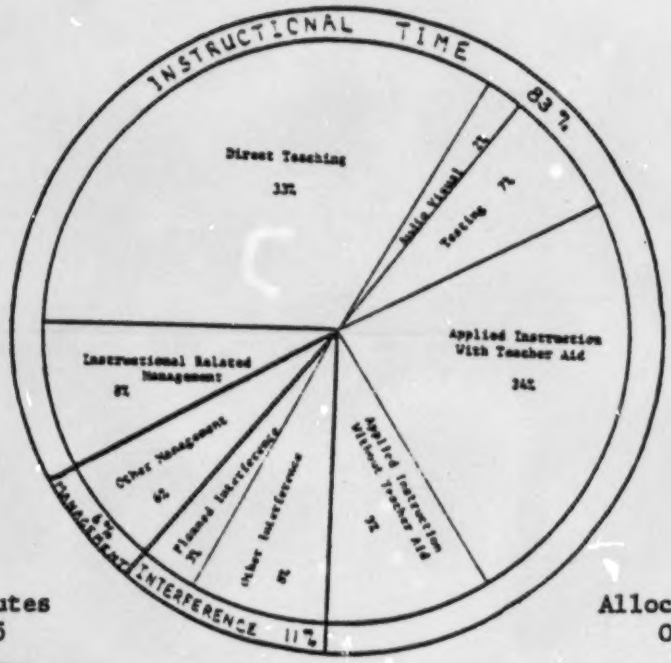
5) The percent of time spent on langauge arts instruction exceeds the time spent on math instructions at each grade level. (See Chart 3 & 4)

6) More direct teaching was observed in langauge arts than math at all grade levels whereas a greater percent of the time in math was devoted to applied instruction with or without teacher assistance. (See Chart 3 & 4)

Chart 1

TIME UTILIZATION

All Grades/Subjects
Allocated Time 55 Minutes
Observations - 128



Language Arts
Allocated Time 56 Minutes
Observations - 65

Math
Allocated Time 54 Minutes
Observations - 63

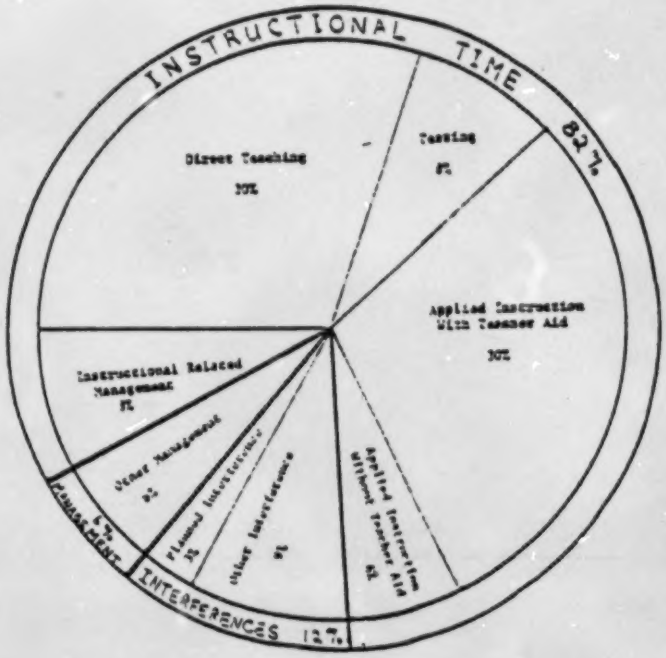


Chart 2 graphically illustrates and compares how the class time is utilized at various grade levels. Results indicate:

1) The percentage of time middle school teachers are spending on instruction is less than the time spent by high school or elementary schools. The greatest percentage of time was spent at elementary schools.

2) More direct teaching was observed at elementary schools and less at middle schools.

3) At the middle schools a greater percentage of the class time was spent on individual assignment (applied instructions) than at high schools or elementary schools.

4) Middle school students spent more of their applied instruction time without teacher aid than the high school or elementary students.

5) Teachers at the elementary schools tended to assist students more on individually assigned work (see applied instructions with teacher aid) than the middle or high school teachers.

6) Interferences were lowest in elementary schools and highest at the high schools.

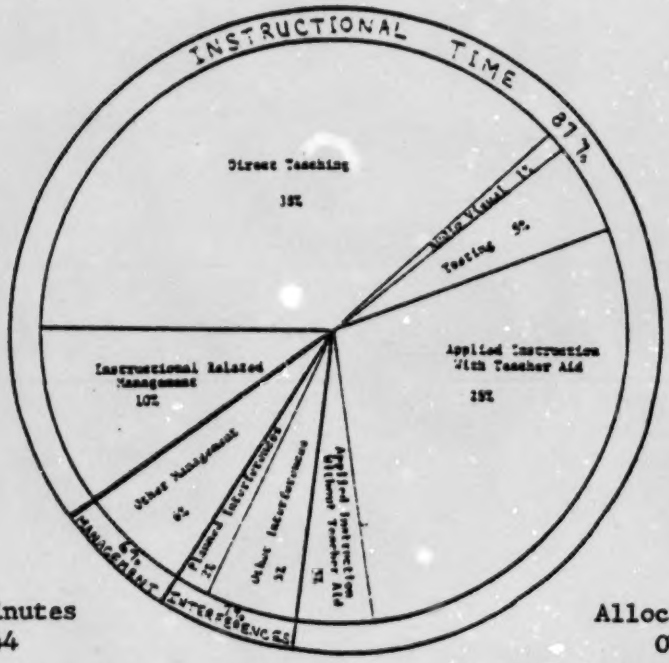
7) Management time was lowest in high schools.

8) One-half of the management time at middle schools was spent on activities not instructional related such as roll call, collecting money, signing notes, etc., whereas, at high school and elementary school a larger percentage of the management time was instructional related.

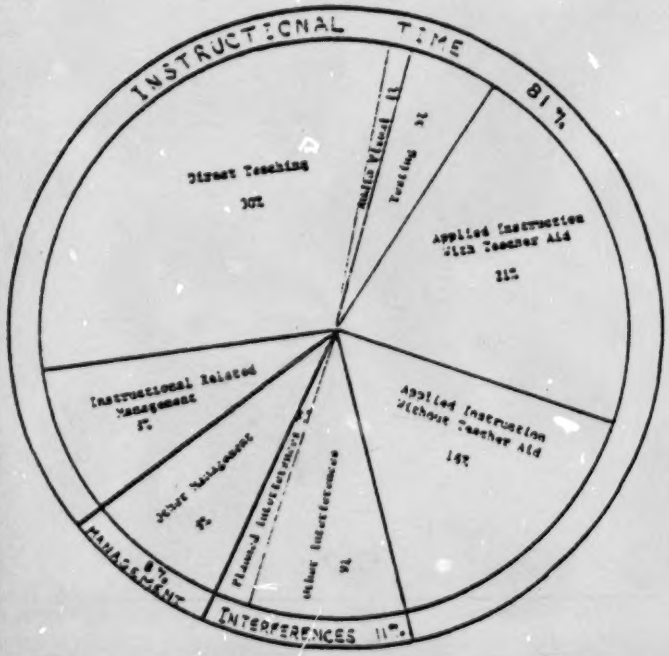
Chart 2

TIME UTILIZATION

Elementary School
Allocated Time 44 Minutes
Observations - 36



Middle School
Allocated Time 64 Minutes
Observations - 44



High School
Allocated Time 55 Minutes
Observations - 48

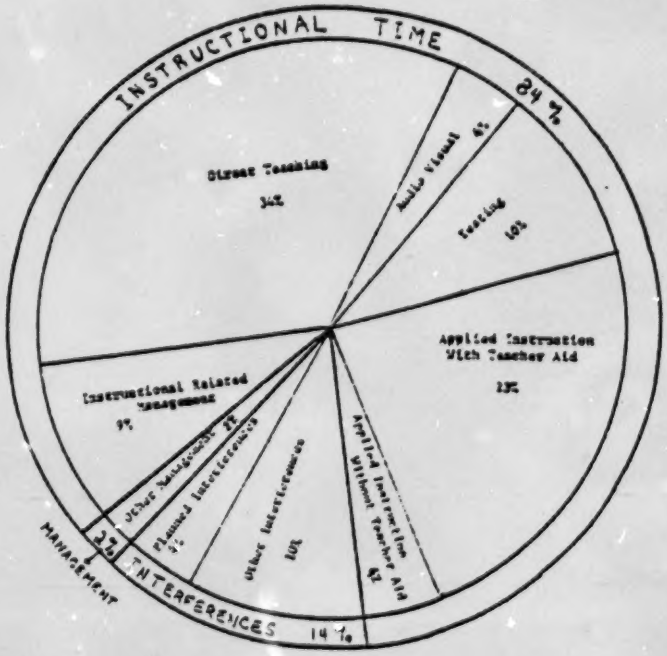


Chart 3 graphically illustrates how language classroom time is utilized at each grade level. Results indicate:

1) Instructional time is lowest at the middle schools and highest at the elementary schools.

2) More direct teaching is done at the elementary schools.

3) Middle school students tended to spend more of their applied instruction time without teacher assistance than the high school or elementary school students.

4) Management time is highest at middle schools.

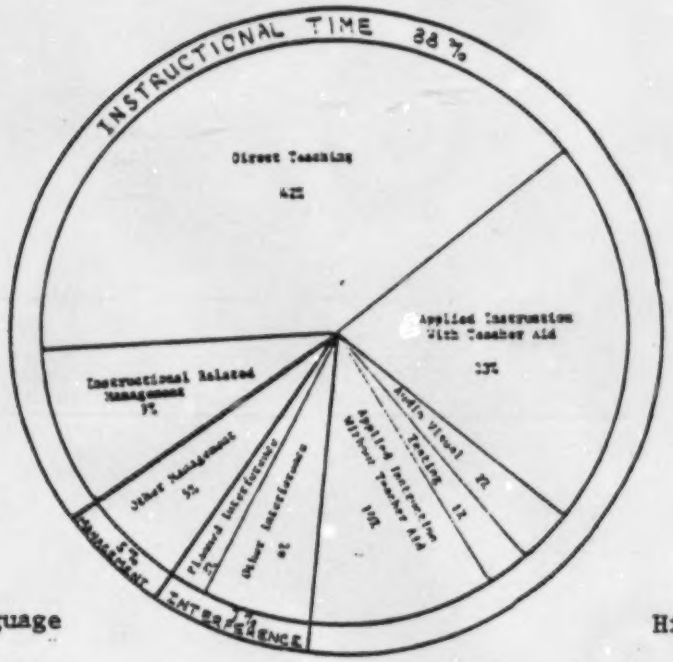
5) Interferences are highest at the high schools.

Chart 3

TIME UTILIZATION

Elementary Language

Allocated Time 44 Minutes



Middle School Language

Allocated Time 66 Minutes

High School Language

Allocated Time 55 Minutes

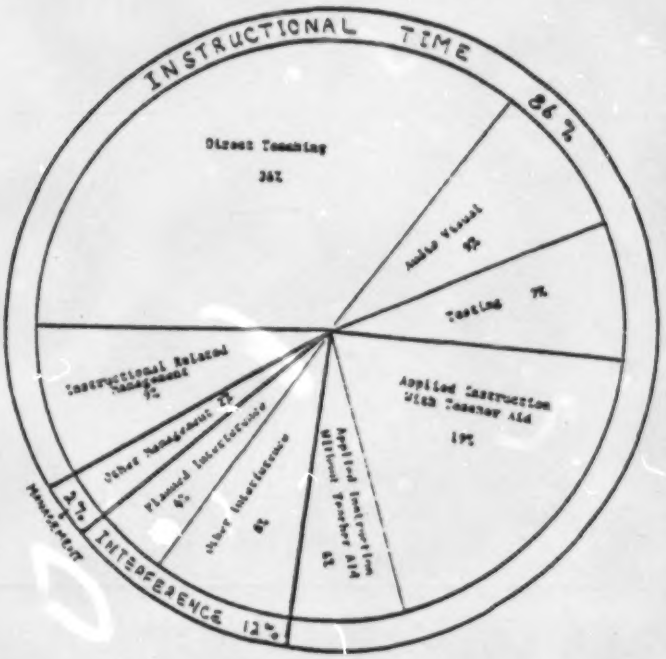


Chart 4 graphically illustrates how math classroom time is utilized at each grade. Results indicate:

1) A greater percentage of the math time at the elementary schools is used for instructions than at high school or middle school level.

2) The majority of the math instructional time in middle school was used for application and much of this time was without teacher assistance.

3) Instructionally related management activities were highest at the elementary schools.

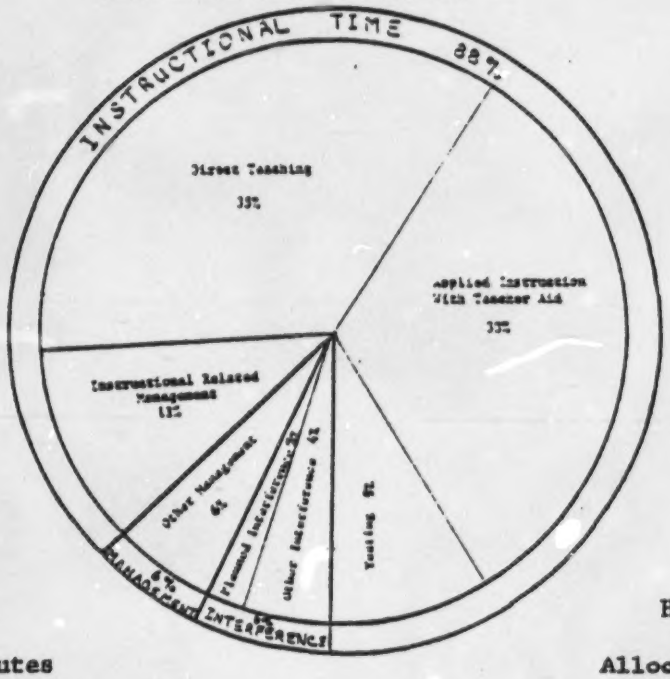
4) Middle school teachers spend more time on management activities unrelated to instruction than elementary or high school teachers.

Chart 4

TIME UTILIZATION

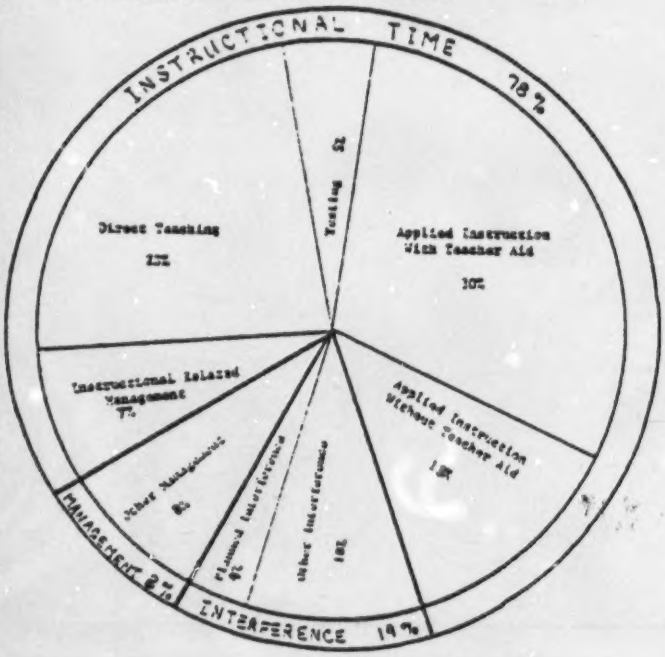
Elementary Math

Allocated Time 45 Minutes



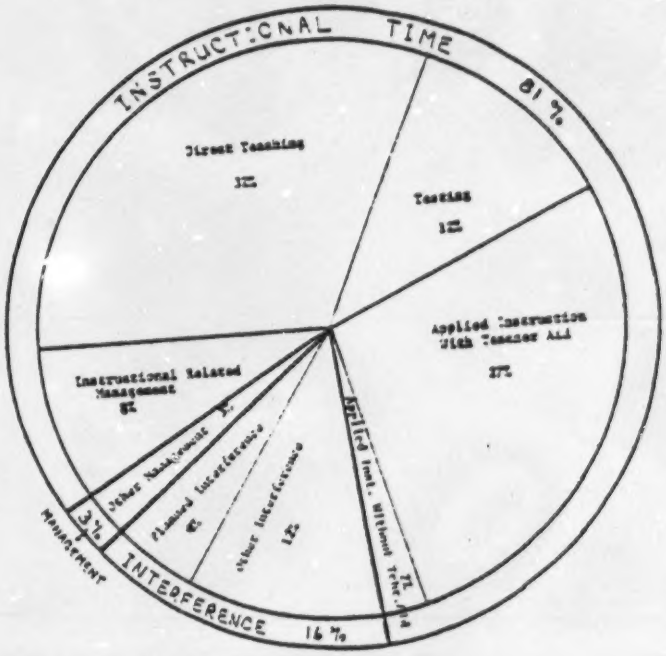
Middle School Math

Allocated Time 62 Minutes



High School Math

Allocated Time 55 Minutes



Discussion of Findings

Instructional Time

It was noted that there were great variations as to how time was utilized in different classrooms. Direct teaching time in the various classes ranged from zero time to a high of 45 minutes at elementary, 52 minutes at middle school, and 50 minutes at high school.

Similar findings were true of instructionally related management time in the individual classes. Although it is recognized that some of the management activities are necessary there was great variation among classrooms. Some of the teachers spent a great deal of time passing out materials, regrouping for instructions and having students grade homework without discussion and call out grades for the teachers to record whereas others spent little or no time on such activities.

Management Time

There was also a great deal of variations as to how much time management activities unrelated to instructions required from classroom to classroom. Many teachers spent as long as 15 minutes in roll call, taking up absentee slips, etc., whereas others spent little or no time on these activities. (See Appendix D)

Interferences

Interference time was recorded as planned or other interferences. The types of interferences observed are given in Appendix E for each grade. Interferences such as socializing, disciplinary action, students or adults coming into room and public address announcements were the cause of a large number of interruptions at the high schools and middle schools. Disciplinary actions and the public address announcements were the major causes of interruptions at the elementary schools.

Variations among classes indicate there were no unplanned interferences observed in some classes whereas in some rooms as long as 27 minutes was taken up in these ad hoc type interferences.

Planned interferences such as pep rallies and assembly required large amounts of time at the high schools and middle schools but very little time at the elementary schools.

Recommendations

Overall the use of time by teachers was very effective but the wide variation from classroom to classroom suggest the following recommendations.

1) Inservice staff meetings at the local school level should be held to discuss the findings in this report as they relate to the perceived use of time in their school.
2) At middle school the local school discussion programs should focus on the following problems, a) increasing the amount of instructional time, b) decreasing the amount of time students spend on applied tasks without teacher aid, c) decreasing the amount of time spent on management activities. (i.e. having students grade each others papers) .
3) Guidelines should be developed to a) decrease use of the public address system while classes are in session, b) reduce the number of class interruptions caused by students bringing messages to classes in session, and c) reduce tardiness of students to class.

APPENDIX

Appendix A

EVALUATION DESIGN

Language arts and math classes to be observed were selected at random in grades 4, 7, and 10. This randomization provided for some observations for each day of the week and each period of the day.

An instrument for classroom observations was devised by the Research staff then presented to a sample of language arts and math teachers for their refinement. The definition of each classification was presented to the teachers to determine if they felt the classifications of various activities were valid. A copy of the Classification of Activities and the Observation Sheets are given in Appendix A.

High School Sampling Procedure

Math classes to be observed at grade ten could be fundamentals of math 3, 4: geometry 1, 2: or algebra 3, 4. Twenty-five math classes were random selected for observation.

English classes to be observed at grade ten could be English literature or grammar classes. A total of twenty-five classes were selected at random for observation.

Middle School Sampling Procedure

There were twenty-five math and twenty-five English classes selected at random for observations at grade seven.

Elementary Sampling Procedure

At the elementary level eighteen language arts and eighteen math classes were randomized for observation from all fourth grade classes.

Number of Classes Observed

Due to lack of time or scheduling problems all of the randomized classes at each grade level were not observed. The numbers observed at each level are given below.

Classes Observed	High School	Middle School	Elementary School
Math	25	20	18
English	23	24	18

Appendix B

DEFINITION OF TERMS

I. Instructional activities consisted of all instructional activities where the majority of students were involved. (See Appendix A)

a. Direct teaching - lecturing, reading aloud by teacher, explaining problems at chalkboard, question and answer sessions, etc.

b. Audio visual - a passive activity such as film viewing.

c. Applied instruction with teacher aid - students were involved in seat assignment (group or individual work) and the teacher moved around the room assisting individual or groups of students.

d. Applied instruction without teacher aid - students were involved in seat assignment and the teacher was not providing any assistance.

e. Instructional related management - those activities directly related to preparing for class instruction.

II. Management activities consisted of activities that required teacher and pupil time. If students were involved in instructional activities and the teacher took care of management activities without interrupting the class it was not recorded as a management activity. (See Appendix D)

Other management - activities such as roll call and collecting absentee slips.

III. Interferences consisted of non-management activities that diminished the class time available for instruction.

a. Planned interferences - those activities planned by the principal or teacher such as pep rallies and assembly programs.

b. Other interferences - ad hoc activities that interrupt the class such as public address announcements, disciplinary actions, etc. (See Appendix E)

FORT WORTH INDEPENDENT SCHOOL DISTRICT
RESEARCH AND EVALUATION DEPARTMENT
3210 WEST LANCASTER
FORT WORTH, TEXAS 76107

CHARLES L. EVANS, Ed.D.
Director
FAE LYSIAK
Assistant Director

DATE: October 17, 1979

TO: Research and Evaluation Staff

FROM: Charles L. Evans CE

SUBJECT: Classroom Observation

Attached are the lists of activities classified by us Tuesday. Instructional people, including principals and teachers, will critique it.

Other decisions follow:

1) Times allotted to the various classifications on the observational guide should sum to the total number of minutes in the scheduled period.

2) If an event disrupts at least 50% of the students, include time of disruption as part of the total class time.

   If the event disrupts fewer than 50% of the students, record the disruption (including time) but do not include the time as part of the total class period.

3) Record 'down-time', 'in-active time', etc. with an explanation and include time in total class period. Down-time, etc. may or may not be due to a 'disruptive' event.

4) Record (but do not include time in total class time) an event that 'disrupts' the teacher but not the students.

5) If teacher corrects misbehavior of an individual without disrupting the class, it is considered a 'teacher interruption' only and recorded as such. The time doesn't apply.

   If the teacher corrects the misbehavior of a student openly in a manner that disrupts students, it is treated in the context of #2 above.

   If the teacher corrects the misbehavior of a student and proceeds to lecture the class regarding behavior, it is considered a 'management activity'.

6) If the teacher is attempting to carry on an instructional event, the fact that students may be inattentive is not considered a 'disruption' in itself; rather, their inattention to task is documented in the appropriate columns on the observational guide.

/bd

CLASSIFICATION OF EVENTS

Instruction	Management	Disruptive
1. Test taking	1. Roll call	1. P. T. A.
2. Lecture	2. Clarifying rules or teacher expectations relative to class behavior	2. P. A. system
3. Explaining examples	3. Non-disruptive correction of a child	3. Student correction teacher/class
4. Work sheets	4. Pencil sharpening	4. Candy sales
5. Homework		5. Fire drill
6. Questions and answers		6. Student leaving for special classes/activities
7. Reading silently or orally		7. Teacher disruptive talk
8. Individual instruction		8. Rough-housing
9. Reviewing		9. Socializing
10. Chalk board		
11. Making assignments		
12. Giving directions		
13. Distributing and collecting materials		
14. Regrouping for instruction		

Appendix C (cont.)

Table: Observation Assignments

R/E PERSONNEL	ELEMENTARY SCHOOLS	MIDDLE SCHOOLS	HIGH SCHOOLS
Dr. Charles L. Evans	#40 Meadowbrook #53 West Handley	#163 Handley #164 Dunbar	#262 North Side #265 Diamond Hill
Fae Lysiak	#29 South Hi Mount #47 M. L. Phillips #85 Western Hills	#155 Meadowbrook #159 Monnig	#268 Western Hills
Whit Johnstone	#51 Wycliff #59 Greenbriar	#151 McLean #165 Meacham	#266 Arlington Heights #270 O. D. Wyatt
Sherry Wallace	#35 Oaklawn #50 Glen Park #87 J. P. Moore	#152 Rosemont #160 Forest Oak	#264 Carter-Riverside #269 Trimble Tech
Sandra Tees	#01 Springdale #12 Sam Rosen #25 Diamond Hill	#156 Stripling #162 Wedgwood	#263 Polytechnic
Sandra Gossie	#34 South Ft. Worth #54 South Hills	#153 Daggett #158 Riverside	#267 Eastern Hills #274 Dunbar
Dan Powell	#09 Charles Nash #15 Denver Avenue #42 H.V. Helbing	#157 J. P. Elder	#260 Southwest #261 Paschal

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Appendix D

MANAGEMENT ACTIVITIES

Each observer listed the types of management activities that took up the most time. These activities listed as those instructional related and others are given below.

Instructional Related Management

1) Having students copy homework and/or class assignment from board.
2) Directions about homework and/or class assignments.
3) Giving directions about tests.
4) Passing in homework, tests, etc.
5) Passing out notebooks, textbooks, dictionaries.
6) Explaining class procedures to be followed.
7) Regrouping of students for instructions
8) Rearranging furniture.
9) Setting up audio-visual equipment.
10) Writing problems or assignment, etc. on board or overhead
11) Having students grade papers or homework of other students without discussion.
12) Having students call out grades of other students from previously graded paper for teacher to record.
13) Explaining grading procedures
14) Teachers questioning about where assigned work is to be found in book.
15) Passing out progress slips
16) Travel time to library
17) Checking in textbooks
18) Making assignment for makeup work
19) Checking notebooks

Other Management Activities

1) Lining up to change classes
2) Lining up for water fountain, restrooms or lunch.
3) Roll call and taking up absentee slips.
4) Announcement of schedule changes, time left in class, etc.
5) Collecting money for outside activities
6) Explanation of tornado drill procedures
7) Putting away materials and cleaning up
8) Selling pencils
9) Enrolling new student
10) Correcting students for talking, etc.
11) Having students call out book numbers to verify they had some book issued
12) Signing notes, passes etc.
13) Passing out rewards for good work

Other Management Activities (cont.)

14) Getting class organized
15) Discussing work habits and behavior of students
16) Discussing individual students behavior problems
17) Collecting erasures
18) Organizing class for dismissal
19) Giving passes to leave room
20) Having students cover books
21) Assigning seats
22) Taking up old books and assigning new books

Appendix E

CLASSROOM OBSERVATION SUMMARY

TYPES OF INTERFERENCES OBSERVED

All observers listed the types of interferences observed and the frequency of occurrences and amount of time expended. A summary is given below by grade.

Type of Interferences - High School (grade 10)

Description	Frequency	Av. Time Exp. for Each(Min.)
Planned		
Pep Rally	3	21
Assembly schedule	3	5
School Play	1	25
Late start due to schedule change	1	5
Ad Hoc		
Public Address System	21	½
Student coming in late	21	½
Socializing	28	4
Discipline (correcting student)	37	1
Teacher out of room	3	2
Students/adults come in to talk to teacher, etc.	30	1½
Settling down time	20	2
Outside distractions	3	1½
Explaining observer	2	1
Parent conference	1	8
Student sharpening pencil during lecture	2	1

Types of Interferences - Middle School (grade 7)

Description	Frequency	Av. Time Exp. for Each (Min.)
Planned		
Homeroom extended	1	10
Assembly	1	40
Assembly count (i.e. optional program)	1	2
Ad Hoc		
Socializing	27	2
Putting away materials	5	2
Discipline (correct class or 1 student)	75	½
P. A. announcement	6	1
Sharpening pencils	9	1½
Settling down	22	1½
Students entering late	14	½

Types of Interferences - Middle School (grade 7)(cont.)

Description	Frequency	Av. Time Exp. for Each (Min.)
Ad Hoc		
Passes to leave class	3	½
Interaction with observer	2	½
Maintenance inspection	1	1
Collecting passes of late or previously absent students	2	½
Outside interruptions	8	1½
Conference with other teacher, principal, vice principal, etc.	10	2
Student bringing messages to teacher or stud.	10	½
Student going to water fountain as group	1	1½
Students covering books	1	5

Types of Interferences - Elementary School (grade 4)

Description	Frequency	Av. Time Exp. for Each (Min.)
Planned		
Children cleaning out desk	2	3
Coming in from recess	1	3
Children coming into class	1	8
Nurses hair inspection	1	7
PTA to collect popcorn money	1	1
Allowing students to leave row by row	1	5
Ad Hoc		
Students entering late	6	1
P.A. announcement	14	1
Student leaving early	3	½
Adult or student entering with messages	9	1
Attending sick child	2	½
Visiting or special teachers entering to get student	5	½
Discipline	18	2
Socializing	6	3
Teacher leaving room	1	3
Teacher talking to other teacher	1	1